

In re Patent Application of Brockman
Serial No. 10/760,445

Page 2 of 9

Claims

1. (original) A cranberry-harvesting apparatus comprising:

- a frame movable over a field of cranberries in a forward direction;
- a plurality of follower assemblies each secured to and below the frame by a support, each follower assembly including:
 - a rod mount having a lower portion, a surface-following leading end, and a pivot attachment to the support at the lower portion behind the center-of-gravity of the follower assembly; and
 - first and second pairs of dislodging rods mounted to the rod mount forward and rearward of the pivot attachment respectively, each pair extending laterally from opposite sides of the lower portion substantially parallel to the field surface and canted rearwardly,

whereby each rod mount is supported such that it moves through the cranberry plants at the speed of the frame to dislodge the cranberries from the plants.

2. (original) The cranberry-harvesting apparatus of claim 1 wherein the first and second pairs of dislodging rods are spring-mounted such that the dislodging rods deflect under load in a plane substantially parallel to the field surface.

3. (original) The cranberry-harvesting apparatus of claim 2 wherein:

- the rod mount is a vertical plate having spring posts extending downward to the lower portion; and
- each dislodging rod has a coiled proximal end forming a spring coiled around one of the spring posts.

In re Patent Application of Brockman
Serial No. 10/760,445

Page 3 of 9

4. (original) The cranberry-harvesting apparatus of claim 3 further including feet extending from the lower portion rearwardly below each pair of spring posts whereby the feet reduce entanglement of plants with the spring posts.

5. (original) The cranberry-harvesting apparatus of claim 1 wherein the dislodging rods have a substantially circular cross-section.

6. (original) The cranberry-harvesting apparatus of claim 1 wherein:

- the frame has a major axis generally perpendicular to the movement thereof and parallel to the field surface;
- each dislodging rod has a free distal end;
- the follower assemblies are laterally spaced substantially equally along the major axis in alternating forward and rearward positions thereby forming offset forward and rearward gangs of adjacent assemblies such that the distal ends of the dislodging rods of adjacent assemblies overlap along the major axis; and
- the distal ends of the dislodging rods of adjacent assemblies of each gang are spaced apart along the direction of movement.

7. (original) The cranberry-harvesting apparatus of claim 6 wherein the space along the direction of movement between the dislodging rod distal ends of adjacent follower assemblies is at least four inches.

8. (original) The cranberry-harvesting apparatus of claim 6 wherein:

- the frame includes a principal cross-member; and
- each support includes a longitudinal arm pivotably mounted to the cross-member.

9. (original) The cranberry-harvesting apparatus of claim 8 wherein each longitudinal arm is downwardly spring-biased against the field surface.

In re Patent Application of Brockman
Serial No. 10/760,445

Page 4 of 9

10. (original) The cranberry-harvesting apparatus of claim 9 wherein each support further includes:

- an anchor arm affixed to the cross-member and having a first connection spaced therefrom;
- a second connection on the longitudinal arm spaced from the cross-member; and
- a spring linkage between the first and second connections such that the longitudinal arm moves under load with respect to the anchor arm to provide the downward biasing.

11. (original) The cranberry-harvesting apparatus of claim 1 wherein each surface-following leading end is substantially convex.

12. (original) The cranberry-harvesting apparatus of claim 1 wherein the frame is operator-movable up and down such that the surface-following leading ends can be positioned in and out of contact with the field surface.

13. (original) The cranberry-harvesting apparatus of claim 1 wherein the space between the first and second pairs of dislodging rods is at least twelve inches.

14. (original) The cranberry-harvesting apparatus of claim 1 wherein the cant angle of the dislodging rods is between 15 and 40 degrees from the major axis.

15. (original) The cranberry-harvesting apparatus of claim 1 further including a drive apparatus to move the frame over a field of cranberries.

16. (original) The cranberry-harvesting apparatus of claim 15 wherein the frame is mounted to the front of the drive apparatus.

In re Patent Application of Brockman
Serial No. 10/760,445

Page 5 of 9

17. (original) The cranberry-harvesting apparatus of claim 15 wherein the frame is mounted to the back of the drive apparatus.

18. (original) The cranberry-harvesting apparatus of claim 1 further including at least one vacuum nozzle behind the follower assemblies whereby the dislodged cranberries are picked up by vacuum suction.

19. (original) The cranberry-harvesting apparatus of claim 18 wherein the at least one vacuum nozzle includes one vacuum nozzle behind each of the follower assemblies.

20. (original) The cranberry-harvesting apparatus of claim 18 further including a collection container.

21. (currently amended) A cranberry-harvesting apparatus comprising:

- a frame movable over a field of cranberries in a forward direction; and
- a plurality of dislodging rods secured to and below the frame wherein the dislodging rods have a spring at the proximal end thereof spring-mounting the dislodging rod to a vertical plate, the dislodging rods positioned substantially in a single plane substantially transverse parallel to the field surface and ~~generally perpendicular~~ substantially horizontally transverse to the direction of movement,

whereby each dislodging rod is moved through the cranberry plants at the speed of the frame to dislodge the cranberries from the plants.

22. (original) The cranberry-harvesting apparatus of claim 21 wherein the dislodging rods are angled slightly rearwardly.

In re Patent Application of Brockman
Serial No. 10/760,445

Page 6 of 9

23. (currently amended) The cranberry-harvesting apparatus of claim 21 wherein the dislodging rods have a free-distal end and a spring-mounted ~~proximal~~ end such that the dislodging rods deflect under load in a plane substantially parallel to the field surface.

24. (original) The cranberry-harvesting apparatus of claim 21 wherein the dislodging rods are secured to the frame by being secured to follower assemblies each having forward and rearward pairs of dislodging rods.

25. (original) The cranberry-harvesting apparatus of claim 24 wherein the follower assemblies are mounted to the frame in alternating forward and rearward positions.

26. (currently amended) A method of harvesting cranberries from a cranberry field including moving frame-mounted, free-ended dislodging rods through cranberry plants, wherein each dislodging rod is (a) spring-mounted to the frame, and (b) oriented substantially horizontally transverse to the direction of movement of the frame, ~~over cranberry plants with each rod~~ (c) in substantially fixed position above the ground, and (d) moving at the speed of the frame thereby to dislodge cranberries from the cranberry plants.

27. (withdrawn) A method of harvesting cranberries from a cranberry field including moving frame-mounted, free-ended dislodging rods, wherein each dislodging rod is spring-mounted to the frame and oriented transverse to the direction of movement of the frame, over cranberry plants with each rod moving at the speed of the frame, thereby to dislodge cranberries from the cranberry plants.

28. (currently amended) The method of claim ~~[[27]]~~ 26 further including the steps of vacuuming up dislodged cranberries immediately after dislodgement and collecting the cranberries in a container.